

Environmental Degradation and Conservation

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Abstract

The environment is the surrounding in which we live. It consists of various aspects like physical, biological, social, cultural etc. Human beings perform all the activities on the environment like the construction of building, houses, bridges, industries etc. These activities affect the various aspects of the environment. They change or disturb their condition. The different aspects of the environment are also changed or disturbed due to various natural disasters like earthquake, volcano etc. This is also known as environmental degradation. Environmental degradation can be defined as the deterioration of the environment due to depletion of resources such as air, water, and soil, the destruction of the ecosystem and the eradication of wildlife.

I. INTRODUCTION

Environmental degradation refers to the deterioration of physical components of the environment brought in by human activities to such an extent that it cannot be set right by self regulatory mechanism of environment. It is the result of developmental processes of economic and technological activities of man. It is caused by several forms of pollution, depletion of natural resources; increasing dependence on energy consuming and ecologically damaging technologies, depletion of forest cover has become a global concern. The environmental crisis is ascribed to exponential growth in human population, fast expanding industries and philosophical religious outlook of society. Man's cruel behavior with environments accelerated the pace of scientific and technological advancement.

Environmental degradation is one of the ten threats officially cautioned by the High-level Panel on Threats, Challenges and Change of the United Nations. The United Nations International Strategy for Disaster Reduction defines environmental degradation as "the reduction of the capacity of the environment to meet social and ecological objectives, and needs". Environmental degradation is of many types. When natural habitats are destroyed or natural resources are depleted, the environment is degraded. Efforts to counteract this problem include environmental protection and environmental resources management. The current top three uses of fresh water account for 95% of its consumption; approximately 85% is used for irrigation of farmland, golf courses, and parks, 6% is used for domestic purposes such as indoor bathing uses and outdoor garden and lawn use, and 4% is used for industrial purposes such as processing, washing, and cooling in manufacturing centers. It is estimated that one in three people over the entire globe are already facing water shortages, almost one-fifth of the world's population live in areas of physical water scarcity, and almost one quarter of the world's population live in a developing country that lacks the necessary infrastructure to use water from available rivers and

aquifers. Water scarcity is an increasing problem due to many foreseen issues in the future, including population growth, increased urbanization, higher standards of living, and climate change.

Environmental degradation may be due to extreme events and hazards or due to pollution. Extreme events and hazards are unexpected threats of large impact. They may be classified on the basis of causative factors. Natural hazards are caused by natural factors. These may be terrestrial natural hazards which occur on the earth's land surface, e.g., the continents, and are caused by endogenetic forces, e.g., volcanic eruptions, earthquakes etc.; atmospheric natural hazards which occur by atmospheric processes affecting the living and non-living (a biotic) components of the natural environmental system, e.g., cyclones, forest fires etc.; and cumulative atmospheric hazards, caused by atmospheric processes which accumulate for several years in continuation, e.g., flood, drought etc. Man-induced hazards are the result of cumulative and even sudden effects of man's activities. These could be physical man-induced hazards, caused by large-scale landslides, deliberate forest fires, etc., chemical and nuclear hazards, caused by the release of toxic elements in the atmosphere by human activities, accidental outbursts of poisonous gases from chemical factories, nuclear explosions, and biological hazards induced by man, for example, sudden increase or decrease in the population of a species in a region due to increased nutrients or increase in toxic elements.

Industrialization and urbanization also put pressure on the agricultural lands, the shortage of which began to be more acutely felt with faster and uncontrolled population growth. Remarkable progress made in the medical sciences has brought about a decline in the death rate. But no similar decline was attempted by the people in the birth rate. Two thousand years ago humans scarcely numbered 250 million; it was only in the early 1800s that the figure reached one billion. A second billion was added in another 100 years, a third in 30 years, a fourth in 15 years, and a fifth in just 13 years. What a pace of population growth! To feed the ever-increasing numbers, agricultural production was increased. Technological inputs certainly produced quick results. But the chemical fertilizers and pesticides have taken a big toll of the soil. They have also brought in their wake new pesticide-resistant pests which devour farm crops. The harmful chemicals get into the ecological cycle and lead to large-scale damage to plants, animals and ultimately even to humans. Recently, a study found that the milk and cereals consumed by Indians contain a high degree of toxic material—all due to indiscriminate use of pesticides. Large scale agricultural production also encouraged huge irrigation projects with concomitant loss of forest land. Canal irrigation has laid waste large tracts of land due to unchecked seepage leading to salinity and alkalinity of soil.

The scarcity of agricultural lands became an excuse for humans to clear the dense forests which in fact served to mitigate the harm and injuries caused by industrialization and urbanization. Trees are mercilessly felled to meet the industrial needs of various kinds as well as the needs of the vast urban population. With deforestation comes the growing menace of soil erosion, drought and other natural calamities. This act of deforesting the land is also ominous to the existence of many species of flora and fauna, even as the extinction of many marine species is feared due to the poisoning of rivers and seas by man-made wastes. The adverse impact on biodiversity may destabilize the ecological balance whose ill-effects are quite intelligible.

The growing lust for luxuries and industrial products has recently further aggravated the crisis. The chloro-fluoro-carbons (CFCs) released into the atmosphere because of the ever-growing use of refrigeration and cooling

devices are depleting the ozone layer which protects the species on earth from being exposed to the harmful ultra-violet rays. Such devastation of nature could easily rebound on humans.

If we analyze the nature of environment degradation, we can only come to the conclusion that human culpability is, indeed, immense. To feed, clothe and shelter themselves, humans brazenly rob nature. The growing population almost renders it impossible to compensate the losses suffered by the environment or allow it the time required to recover. The urge to gain greater and greater material prosperity has not only degraded natural resources but has certain other dangerous portents. The damage caused during the Gulf War to the seas and marine life shows the extent to which humans can go, without compunction, to achieve self-aggrandisement. The search for energy and defence superiority has led humans to exploit the power of the atom. But they have shown a callous disregard for the accompanying dangers of radiation and tackling nuclear wastes. Unless human beings mend their ways, and fast, they will create another Venus or Mars of the Earth.

II. CAUSES OF ENVIRONMENTAL DEGRADATION

Some environmental life species require substantial areas to help provide food, living space, and other different assets. These creatures are called area specific. At the point when the biome is divided, the vast patches of living space don't exist anymore. It gets to be more troublesome for the wildlife to get the assets they need in order to survive. The environment goes on, even though the animals and plant life are not there to help sustain it properly.

1. Land Disturbance: A more basic cause of environmental degradation is land damage. Numerous weedy plant species, for example, garlic mustard, are both foreign and obtrusive. A rupture in the environmental surroundings provides for them a chance to start growing and spreading. These plants can assume control over nature, eliminating the local greenery. The result is territory with a solitary predominant plant which doesn't give satisfactory food assets to all the environmental life. Whole environments can be destroyed because of these invasive species.

2. Pollution: Pollution, in whatever form, whether it is air, water, land or noise is harmful for the environment. Air pollution pollutes the air that we breathe which causes health issues. Water pollution degrades the quality of water that we use for drinking purposes. Land pollution results in degradation of earth's surface as a result of human activities. Noise pollution can cause irreparable damage to our ears when exposed to continuous large sounds like honking of vehicles on a busy road or machines producing large noise in a factory or a mill.

3. Overpopulation: Rapid population growth puts strain on natural resources which results in degradation of our environment. Mortality rate has gone down due to better medical facilities which has resulted in increased lifespan. More population simple means more demand for food, clothes and shelter. You need more space to grow food and provide homes to millions of people. This results in deforestation which is another factor of environmental degradation.

4. Landfills: Landfills pollute the environment and destroy the beauty of the city. Landfills come within the city due the large amount of waste that gets generated by households, industries, factories and hospitals. Landfills pose a great risk to the health of the environment and the people who live there. Landfills produce foul smell when burned and cause huge environmental degradation.

5. Deforestation: Deforestation is the cutting down of trees to make way for more homes and industries. Rapid growth in population and urban sprawl are two of the major causes of deforestation. Apart from that, use of forest land for agriculture, animal grazing, harvest for fuel wood and logging are some of the other causes of deforestation. Deforestation contributes to global warming as decreased forest size puts carbon back into the environment.

6. Ruinous Agricultural Practices: Intensive agricultural practices have led to the decline in quality of most of our natural environments. Majority of farmers resort to converting forests and grasslands to croplands which reduces the quality of natural forests and vegetation cover. The pressure to convert lands into resource areas for producing priced foods, crops, and livestock rearing has increasingly led to the depreciation of natural environments such as forests, wildlife and fertile lands.

Intensive agricultural practices destroy fertile lands and nearby vegetation cover due to the accumulation of toxic substances like bad minerals and heavy metals which destroy the soil's biological and chemical activities. Runoffs of agricultural wastes and chemical fertilizers and pesticides into marine and freshwater environments have also deteriorated the quality of wild life habitats, natural water resources, wetlands and aquatic life.

7. Environmental Pollution: Most of the planet's natural environments have been destroyed and a large portion is under huge threat due to the toxic substances and chemicals emitted from fossil fuel combustions, industrial wastes, and homemade utilities among other industry processed materials such as plastics. Land, air, and water pollution pose long-term cumulative impacts on the quality of the natural environments in which they occur.

Seriously polluted environments have become insignificant in value because pollution makes it harsh for the sustainably of biotic and abiotic components. Pollution impacts the chemical compositions of lands, soil, ocean water, underground water and rocks, and other natural processes. Air pollution from automobiles and industries that results in the formation of acid rain which in turn brings about acidic lake is a good example of how the environment is degraded by pollution.

8. Improper Land use Planning and Development: The unplanned conversion of lands into urban settings, mining areas, housing development projects, office spaces, shopping malls, industrial sites, parking areas, road networks, and so on leads to environmental pollution and degradation of natural habitats and ecosystems. Mining and oil exploration, for instance, renders land unusable for habitation and causes other forms of environmental degradation by releasing toxic materials into the environment. Improper land use has led to the loss and destruction of millions of acre of natural environments across the globe.

9. Natural Causes: Despite the fact that environmental degradation is under normal circumstances associated with anthropogenic activities, natural causes are also contributors. Natural events such as wildfires, hurricanes, landslides, tsunamis and earthquakes can totally lower the survival grade of local animal communities and plant life in a region. These disasters can also destroy alter the nature of the landscape rendering it unable to support

life forms on it. Besides, occurrences such as hurricanes and flooding can wash or force the migration of invasive species into foreign environments which can lead to its eventual degradation.

III. EFFECTS OF ENVIRONMENTAL DEGRADATION

1. Impact on Human Health: Human health is heavily impacted by environmental degradation. Reduction in water quality is responsible for more than two million deaths and billions of illness annually across the globe. Due to environmental degradation, the results include water scarcity and decline in quality foods. Reduction in air quality is responsible for more than 300,000 deaths annually and millions of chronic diseases.

Landfills increase the risk of hazardous materials getting into the food chain which causes biomagnifications and the ultimate risk of developing chronic diseases. Altogether, the toxic wastes and harmful chemicals from factories, agriculture and automobiles cause illnesses and death in children and adults.

2.Poverty: In the majority of developing countries, poverty is attributed to poor crop harvests and lack of quality natural resources that are needed to satisfy basic survival needs. The inadequacy basic survival resources and lack of quality of food is the direct result of environmental degradation in the regions. Most vulnerability situations brought about by water shortages, climate change, and poor crop yields in developing countries are tied to environmental degradation. Hence, the lack of access to adequate basic needs such as water and food directly induce poverty.

3.Atmospheric Changes: Environmental degradation can alter some of the natural process such as the water cycle and the normal processes of animal and plant activities. Also, environmental degradation aspects such as deforestation and mining destroy the natural land cover. This, together with air, water, and land pollution pose several atmospheric alteration threats. The alterations include global warming and climate change which can increase the risks of climatic natural disasters, and ozone layer depletion which increases the risk of skin cancer, eye disease, and crop failure.

4.Loss of Biodiversity: Degradation of the environment has recorded a continued destruction of wild forests and the damage of natural ecosystems that has greatly contributed to the mass extinction of species. The number of threatened species persists to multiply worldwide whereas some have completely gone extinct. This is because of the human activities such as acidifying water systems, over-exploitation of natural resources, overpopulation, and the deliberate and indirect destruction of natural systems necessary for the survival of different species. These anthropogenic activities simply alter the natural process combined, thus, destroying the natural ecosystems supporting biodiversity.

5.Scarcity of Natural Resources: Environmental degradation through aspects such as over-exploitation of natural resources, pollution, and deforestation can contribute to the scarcity of resources particularly arable land, water, genetic resources, medicinal plants, and food crops.

IV. CONSERVATION OF ENVIRONMENTAL DEGRADATION

Our planet is the most important thing in all of our lives, regardless of who we are. Preventing environmental degradation is a journey that we should all take part in. Keeping our planet clean for future generations is one of the most important things we can do with our limited time here, so that our children's children can enjoy what

we had. Erosion is an important part of the Earth's cycle, but those who don't care much about the environment itself have forgotten that, too. Air, soil and water are our most precious resources, and we simply cannot afford to lose them. Without these three resources, we would perish.

1.Reduce Our Over All Consumption of Resources: Our natural resources that the planet gives us are limited, but many people seem to forget that. If we cut down our consumption by at least 70%, think of how much we could save. This includes cutting down trees to make paper and other materials that we need, as well as fossil fuels, such as oil, to fuel our cars and keep our industries moving. There are many companies who have already made the switch to go green for the purpose of cutting down their over all resource consumption, such as power, which every company should consider doing. Our wildlife and flora rely on their natural environment, and if we keep tearing it down to serve our needs, we will have nothing left.

2.Reuse All the Resources and Materials That We Possibly Can: Second-hand consumption is definitely looked down upon, probably because we know that for what we use, we'll have more eventually. However, this will not be the case forever. Once something runs out, we will never be able to get that resource back. If people start reusing specific things, environmental degradation will be greatly reduced. We all must remember that we do not use the things that were once used before us, which is a scary thought in itself.

3.Recycle What We Can, Whenever We Can: Recycling is the best way to slow down environmental degradation, and is something that everyone should partake in. If we want to save the planet and take on this mission together, recycling the best way to fight environmental degradation together.

4.Green Transportation: If we all ride bikes instead of driving cars, we could combat pollution quite easily. Cars and other vehicles release pollution into the air, which only causes the slow, deadly process of environment degradation to speed up, and cut our time on this planet even shorter. Not only would the air be so much cleaner if we all chose green transportation, such as bike riding to get to where we all need to go throughout the day, but over time we would all be in better shape. Meeting the needs of everyone, especially our planet, when it comes to green transportation is so important, and among one of the best ways to combat environments degradation.

5.Give Back to the Environment: The best possible way to help prevent environmental degradation, is to give back to the environment. You can do this successfully by planting three trees for every one that is cut down for the forestry industry. When it comes to the planet's trees, you can never have enough. Trees give us clean air to breathe, they literally filter out the bad and pump out the good, which is why we'd never survive without them. Keeping our forests alive are not only important to our ecosystem, but to the wildlife system of the world as well, because it's their home. When the food chain is affected, we as humans are all affected.

V. CONCLUSION

The environment is being destroyed as a result of human activities fed by an insatiable desire for acquiring wealth and property. Rapid environmental degradation occurred within the last two decades in most towns and villages. Factors contributing to the environmental degradation and the role traditional leaders can play in conserving and protecting the environment. For resolving the increasing stress on the environment and resources, and also responding to the ever-increasing demands of the citizens for environmental quality protection and improvement in ecological environment, the Environmental Protection Bureau (DSPA)

conducted the environmental master planning of Macao SAR, in order to realize the vision of "Building a Low Carbon Macao, Creating Green Living Together".

However, since the environment is a complex, variable and extensive system, protecting the environment is a hard and enduring task. It is impossible that all the existing pollution problems in the environment can completely be resolved in the next decade. A wonderful and quality environment must be achieved by continuous planning, governmental policies, efforts of the enterprises and public participation.

It is the responsibility of everyone to protect our environment. Let us fulfill our responsibilities in environmental protection, creating a quality ecological environment and sharing wonderful green living together.

There is still hope for us. We can, to a certain degree, reverse the process of degradation of our surroundings, for Mother Earth is forgiving and able to heal her wounds if we do not inflict more grievous ones on her. As Paul Bigelow Sears said, "How far must suffering and misery go before we see that even in the day of vast cities and powerful machines, the good earth is our mother and that if we destroy her, we destroy ourselves." So we should act today for a better tomorrow for our children.

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